

MASTER LINK

SCORE DISTRIBUTION
WRITING FINAL TEST

| NO | A1 | A2 | |
|---------------------------------|---|---|---------------------------------|
| 1 | 87 | 77 | 1 |
| 2 | 87 | 78 | 2 |
| 3 | 88 | 78 | 3 |
| 4 | 88 | 79 | 4 |
| 5 | 88 | 80 | 5 |
| 6 | 88 | 80 | 6 |
| 7 | 89 | 81 | 7 |
| 8 | 89 | 81 | 8 |
| 9 | 89 | 83 | 9 |
| 10 | 89 | 83 | 10 |
| 11 | 90 | 84 | 11 |
| 12 | 90 | 85 | 12 |
| 13 | 78 | 80 | 1 |
| 14 | 78 | 81 | 2 |
| 15 | 78 | 82 | 3 |
| 16 | 79 | 82 | 4 |
| 17 | 79 | 84 | 5 |
| 18 | 80 | 84 | 6 |
| 19 | 81 | 85 | 7 |
| 20 | 82 | 85 | 8 |
| 21 | 83 | 85 | 9 |
| 22 | 83 | 86 | 10 |
| 23 | 84 | 87 | 11 |
| 24 | 85 | 88 | 12 |
| MEAN SCORE | | | |
| A ₁ | A ₂ B ₁ | A ₂ B ₂ | B ₁ |
| 84.67 | 88.50 | 80.75 | 84.63 |
| A ₂ | A ₂ B ₃ | A ₂ B ₄ | B ₂ |
| 82.42 | 80.83 | 84.08 | 82.46 |
| A ₁ > A ₂ | A ₁ B ₁ > A ₂ B ₁ | A ₂ B ₃ > A ₂ B ₄ | B ₁ > B ₂ |
| 2.25 | 7.67 | -3.33 | 2.17 |
| OK | OK | OK | OK |

CHECK PREREQUISITE
NORMALITY

| NO | VARIABLE | X | n | L _u Max | L _u obs | Decision | Result | Test decision | Result |
|----|---------------------|-------------------------------|----|--------------------|--------------------|----------|--------|-----------------|--------|
| 1 | Quantum | A ₁ | 24 | 0.1186 | 0.1730 | Lo < Li | Normal | Ho was accepted | OK |
| 2 | DI | A ₂ | 24 | 0.0975 | 0.1730 | Lo < Li | Normal | Ho was accepted | OK |
| 3 | High CQ | B ₁ | 24 | 0.1272 | 0.1730 | Lo < Li | Normal | Ho was accepted | OK |
| 4 | Low CQ | B ₂ | 24 | 0.0884 | 0.1730 | Lo < Li | Normal | Ho was accepted | OK |
| 5 | Quantum and High CQ | A ₁ B ₁ | 12 | 0.1915 | 0.2420 | Lo < Li | Normal | Ho was accepted | OK |
| 6 | Quantum and Low CQ | A ₁ B ₂ | 12 | 0.1809 | 0.2420 | Lo < Li | Normal | Ho was accepted | OK |
| 7 | DI and High CQ | A ₂ B ₁ | 12 | 0.1308 | 0.2420 | Lo < Li | Normal | Ho was accepted | OK |
| 8 | DI and Low CQ | A ₂ B ₂ | 12 | 0.1356 | 0.2420 | Lo < Li | Normal | Ho was accepted | OK |

HOMOGENEITY

| NO | FORMULA | χ^2_{obs} | χ^2_{table} | Decision | Result | Test decision | Result |
|----|--------------|----------------|------------------|-----------------------|---------|-----------------|--------|
| 1 | VERSI KAMPUS | 6.843 | 7.81 | $\chi^2_o < \chi^2_t$ | Homogen | Ho was accepted | OK |
| 2 | VERSI PALGUN | 6.723 | 7.815 | $\chi^2_o < \chi^2_t$ | Homogen | Ho was accepted | OK |
| 3 | VERSI WTIWIK | 6.723 | 7.815 | $\chi^2_o < \chi^2_t$ | Homogen | Ho was accepted | OK |
| 4 | WTWIK BARIS | 3.129 | 3.841 | $\chi^2_o < \chi^2_t$ | Homogen | Ho was accepted | OK |
| 5 | WTWIK KOLOM | 3.570 | 3.841 | $\chi^2_o < \chi^2_t$ | Homogen | Ho was accepted | OK |

TESTING HYPOTHESES

1 ANOVA

| NO | Source of Variance | SS | df | MS | Fobs | Ft(.05) | Result | Decision | Ft(.01) | Result | Decision |
|----|---------------------------------|--------|----|---------|---------|---------|---------|-------------|---------|---------|-------------|
| 1 | Between Column (B) | 60.75 | 1 | 60.750 | 12.271 | 4.06 | Fo > Ft | Significant | 7.25 | Fo > Ft | Significant |
| 2 | Between Rows (A) | 56.33 | 1 | 56.333 | 11.379 | 4.06 | Fo > Ft | Significant | 7.25 | Fo > Ft | Significant |
| 3 | Column by rows Interaction (AB) | 363.00 | 1 | 363.000 | 73.322 | 4.06 | Fo > Ft | Significant | 7.25 | Fo > Ft | Significant |
| 4 | Between groups (G) | 480.08 | 3 | 160.028 | 96.972 | | | | | | |
| 5 | Within groups (E) | 217.83 | 44 | 4.951 | 44.000 | | | | | | |
| 6 | Total (D) | 697.92 | 47 | 14.849 | 140.972 | | | | | | |

2 TUKEY

| NO | Comparative Variables | X1 | X2 | Difference | qobs | qt(.05) | Result | Decision | Ft(.01) | Result | Decision |
|----|---------------------------------|-------|-------|------------|-------|---------|---------|-------------|---------|---------|-------------|
| 1 | Columns (Method) : Quantum > DI | 84.67 | 82.42 | 2.25 | 4.95 | 3.79 | qo > qt | Significant | 4.70 | qo > qt | Significant |
| 2 | Rows (CQ) : High > Low | 84.63 | 82.46 | 2.17 | 4.77 | 3.79 | qo > qt | Significant | 4.70 | qo > qt | Significant |
| 3 | Cells : Quantum High > DI High | 88.50 | 80.75 | 7.75 | 12.07 | 3.79 | qo > qt | Significant | 4.70 | qo > qt | Significant |
| 4 | Cells : Quantum Low < DI Low | 80.83 | 84.08 | -3.25 | 5.06 | 3.79 | qo > qt | Significant | 4.70 | qo > qt | Significant |

CHECK DATA

| | | | | | | | |
|------------------|--------------------------|----|-------|---|---|-------|---|
| 1 | PREREQUISITE NORMALITY | OK | SUDAH | 8 | 8 | MASHI | 0 |
| 2 | PREREQUISITE HOMOGENEITY | OK | 8 | 5 | 0 | 0 | |
| 3 | ANOVA | OK | 6 | 6 | 0 | 0 | |
| 4 | TUKEY | OK | 8 | 8 | 0 | 0 | |
| KONFIGURASI DATA | | | | | | | |
| OK | | | | | | | |

| Q | Z | Z |
|-----|-----|-----|
| 31 | 29 | 30 |
| 66 | 64 | 65 |
| 101 | 99 | 100 |
| 136 | 134 | 135 |
| 171 | 169 | 170 |
| 206 | 204 | 205 |
| 241 | 239 | 240 |
| 276 | 274 | 275 |

6
8

DESTAT

| NO | Data | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|----|-------------------|----------------|----------------|----------------|----------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------|
| | | A ₁ | A ₂ | B ₁ | B ₂ | A ₁ B ₁ | A ₁ B ₂ | A ₂ B ₁ | A ₂ B ₂ | |
| 1 | Respondents | n | 24 | 24 | 24 | 24 | 12 | 12 | 12 | |
| 2 | Score | Total | 2032 | 1978 | 2031 | 1979 | 1062 | 970 | 969 | 1009 |
| | | Hl | 90 | 88 | 90 | 88 | 90 | 85 | 85 | 88 |
| | | Lo | 78 | 77 | 77 | 78 | 87 | 78 | 77 | 80 |
| | | Range | 12 | 11 | 13 | 10 | 3 | 7 | 8 | 8 |
| 3 | Class | Result | 5.55 | 5.55 | 5.55 | 5.55 | 4.56 | 4.56 | 4.56 | 4.56 |
| | | Decision | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 |
| 4 | Interval | Result | 2.4 | 2.20 | 2.60 | 2.00 | 0.75 | 1.75 | 2.00 | 2.00 |
| | | Decision | 3 | 3 | 3 | 2 | 1 | 2 | 3 | 3 |
| 5 | Mean | ID | 84.67 | 82.42 | 84.63 | 82.46 | 88.50 | 80.83 | 80.75 | 84.08 |
| | | FD 1 | 84.63 | 82.50 | 84.75 | 80.17 | 88.50 | 80.83 | 80.50 | 84.25 |
| | | FD 2 | 84.63 | 82.50 | 84.75 | 80.17 | 88.50 | 80.83 | 80.50 | 84.25 |
| 6 | Mode | ID | 88.00 | 85.00 | 88.00 | 85.00 | 88.00 | 78.00 | 78.00 | 85.00 |
| | | FD | 88.50 | 83.93 | 88.50 | 80.50 | 88.50 | 78.75 | 80.00 | 84.79 |
| 7 | Median | ID | 86.00 | 82.50 | 86.00 | 82.50 | 88.50 | 80.50 | 80.50 | 84.50 |
| | | FD | 85.50 | 82.64 | 85.50 | 80.25 | 88.50 | 80.50 | 80.30 | 84.50 |
| 8 | Standar Deviation | ID | 4.34 | 2.98 | 4.39 | 2.93 | 1.00 | 2.52 | 2.56 | 2.43 |
| | | FD 1 | 4.51 | 3.15 | 4.36 | 2.18 | 1.00 | 2.39 | 2.81 | 2.60 |
| | | FD 2 | 4.51 | 3.15 | 4.36 | 2.18 | 1.00 | 2.39 | 2.81 | 2.60 |
| | | ID | 4.34 | 2.98 | 4.39 | 2.93 | 1.00 | 2.52 | 2.56 | 2.43 |

| CQ | METHODS | | | | | | Total | | |
|-----------------------|--------------------------------|-------|----------|----------------------------------|-------|----------|--------------------------|-------|----------|
| | QUANTUM (A1) or c1 | | | DIRECT INSTRUCTION (A2) or c2 | | | SUM (A or c) Methods | | |
| HIGH (B1) or r1 | 1. A1B1 or r1c1 or X1 or Xr1c1 | | | 2. A2B1 or r1c2 or X2 or Xr1c2 | | | B1 or r1 or Xr1 or Xr1c3 | | |
| | No | X1 | X12 | No | X2 | X22 | No | X r1 | X r12 |
| | n1 | 12 | 12 | n2 | 12 | 12 | nr1 | 24 | 24 |
| | Σ X1 | 1062 | 93.998 | Σ X2 | 969 | 78.319 | Σ Xr1 | 2031 | 172.317 |
| | X̄ | 88.50 | 7.833.17 | X̄ | 80.75 | 6.526.58 | X̄ | 84.63 | 7.179.88 |
| LOW (B2) or r2 | 3. A1B2 or r2c1 or X3 or Xr2c1 | | | 4. A2B2 or r2c2 or X4 or Xr2c2 | | | B2 or r2 or Xr2 or Xr2c3 | | |
| | No | X3 | X32 | No | X4 | X42 | No | X r2 | X r22 |
| | n3 | 12 | 12 | n4 | 12 | 12 | n | 1979 | 163383 |
| | Σ X3 | 970 | 78.478 | Σ X4 | 1009 | 84.905 | Σ Xr2 | 1979 | 163383 |
| | X̄ | 80.83 | 6.539.83 | X̄ | 84.08 | 7.075.42 | X̄ | 82.46 | 6.807.63 |
| Total CQ | A1 or c1 or Xc1 or Xr3c1 | | | A2 or c2 or Xc2 or Xr3c2 | | | AB or r1 or X1 or Xr3c3 | | |
| | No | Xc1 | Xc12 | No | Xc2 | Xc22 | No | X1 | X12 |
| | n | 24 | 24 | n | 24 | 24 | nt | 48 | 48 |
| | Σ Xc1 | 2032 | 172.476 | Σ Xc2 | 1978 | 163.224 | Σ Xt | 4010 | 335.700 |
| | X̄ | 84.67 | 7.186.50 | X̄ | 82.42 | 6.801.00 | X̄ | 83.54 | 6.993.75 |